

WHAT IS CLAIMED IS:

1. A piezoelectric generator comprising an oscillator package, including a piezoelectric oscillator sealed in a container and electrodes for external connection formed on the surface of the container, and an electronic component mounted integrally on the oscillator package, wherein, the electronic component is mounted on the same surface of said container that carries the electrodes for external connection thereon.
2. The piezoelectric generator according to claim 1, wherein said container is composed of a multi-layer substrate having a recess for the storage of the piezoelectric oscillator and a lid member fixed to the multi-layer substrate so as to cover the recess, and said electronic component and said electrodes for external connection are provided on the surface of the multi-layer substrate on the side opposite the lid member.
3. The piezoelectric generator according to claim 2, wherein said multi-layer substrate has a substantially quadrangular shape, and said electrodes for external connection are arranged near the four corners of the multi-layer substrate, individually.
4. The piezoelectric generator according to claim 3, wherein said electrodes for external connection are projecting electrodes having a height greater than the mounting height of the electronic component.
5. The piezoelectric generator according to claim 4, wherein each said projecting electrode is a ball-

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shaped electrode formed of a solder ball.

6. The piezoelectric generator according to claim 1, 2 or 4, wherein said electronic component is composed of an IC chip and a capacitor.

5 7. The piezoelectric generator according to claim 6, wherein said IC chip is mounted substantially on the central portion the multi-layer substrate, said capacitor is mounted adjacent to one side of the IC chip, and an injection area for a sealing resin is
10 provided on the other side of the IC chip.

8. The piezoelectric generator according to claim 6 wherein said sealing resin for sealing the IC chip is injected from the side of an area on which the capacitor is not mounted.

15 9. The piezoelectric generator according to claim 1 or 2, wherein said electronic component is composed
112 of at least an IC chip and said multi-layer substrate has an inspection terminal for the piezoelectric oscillator in a position within the IC chip mounting
20 area and off connecting terminals of the IC chip.

10. The piezoelectric generator according to claim 1, wherein said piezoelectric oscillator is a crystal oscillator.

11. The piezoelectric generator according to claim 2 or 3, wherein the outer peripheral sidewall surface of said multi-layer substrate is provided with terminals for adjustment.

12. A structure for mounting a piezoelectric generator on a mountable substrate,
30 the piezoelectric generator being the

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piezoelectric generator according to any one of claims 1 to 3,

the mountable substrate having a recess or hole formed therein,

5 at least a part of the electronic component of the piezoelectric generator being adapted to be stored in the recess or hole of the mountable substrate when the electrodes for external connection of the piezoelectric generator are connected to the mountable
10 substrate.

13. A piezoelectric generator comprising:

a container including a metallic cap put on the upper surface of a substrate in the form of a flat plate, the cap having a skirt portion bonded to the
15 substrate so as to define a space in which a crystal oscillator is to be sealed between the substrate and the cap;

the crystal oscillator placed on the upper surface of the substrate in the container;

20 electrodes for external connection arranged on the peripheral portion of the lower surface of the substrate; and

an electronic component mounted on the lower surface of the substrate.

25 14. The piezoelectric generator according to claim 13, wherein said electrodes for external connection are arranged so as to project downward from the lower surface of said substrate.

15. The piezoelectric generator according to
30 claim 13, wherein said substrate is quadrangular.

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Fig. 14

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